

AMENDMENTS TO THE CLAIMS:

Please cancel claims 1-29, without prejudice. Please add new claims 30-59, as shown below.

This listing of claims will replace all prior versions and listings of claims in the Application:

Claim 1 - 29 (cancelled)

Claim 30 (new): A process for forming a thin film of material from a substrate, comprising the steps of:

- (a) forming a buried confinement layer of reduced thickness, at a distance from a surface of said substrate, the confinement layer being a layer of inclusions constituting a trap zone for gaseous compounds;
- (b) treating the substrate so as to introduce a dose of said gaseous compounds in the substrate, at a mean depth comprised within or at the vicinity of the confinement layer, in order to induce a layer of micro-cavities along a fracture plane, the presence of the inclusions resulting in obtaining a layer of micro-cavities of a thickness reduced with respect to the layer which would have been obtained in the absence of the inclusions; and
- (c) separating and recovering the thin film from the substrate along the fracture plane.

Claim 31 (new): The process according to claim 30, wherein said gaseous compounds are implanted into said substrate at a mean depth of penetration corresponding to the depth of the layer of inclusions.

Claim 32 (new): The process according to claim 30, wherein said gaseous compounds are implanted into said substrate at a mean depth of penetration close to the layer of inclusions, and

including the step of heat treating said substrate following implantation of said gaseous compounds so as to cause migration of said gaseous compounds to the layer of inclusions.

Claim 33 (new): The process according to claim 30, wherein the substrate is composed of a main part supporting a film structure in which the thin film is delimited.

Claim 34 (new): The process according to claim 33, wherein all or part of the said supported film structure is formed by an epitaxial growth process.

Claim 35 (new): The process according to claim 30, wherein the main part of the substrate is reusable.

Claim 36 (new): The process according to claim 33, wherein the layer of inclusions is formed by a film deposition process.

Claim 37 (new): The process according to claim 36, wherein the layer of inclusions consists of generating columns.

Claim 38 (new): The process according to claim 36, wherein the layer of inclusions consists of generating grain joints.

Claim 39 (new): The process according to claim 30, wherein the inclusions have a chemical affinity with the gaseous compounds.

Claim 40 (new): The process according to claim 30, wherein the inclusions originate from a parametric mismatch of material forming the inclusions layer with adjacent regions of the substrate.

Claim 41 (new): The process according to claim 33, wherein the layer of inclusions is formed by etching.

Claim 42 (new): The process according to claim 33, wherein the layer of inclusions is formed by implantation of an element or elements in a layer of the substrate.

Claim 43 (new): The process according to claim 39, including the step of heat treating the substrate so as to increase trapping efficiency of the implanted elements.

Claim 44 (new): The process according to claim 39, including the step of heat treating the substrate so as to modify morphology of the inclusions.

Claim 45 (new): The process according to claim 33, wherein the inclusions layer is produced by heat treatment of at least one film in the film structure.

Claim 46 (new): The process according to claim 33, wherein the inclusions layer is produced by application of stress to at least one film of the film structure.

Claim 47 (new): The process according to claim 30, wherein the gaseous compounds are implanted by bombardment of neutral compounds or ions.

Claim 48 (new): The process according to claim 30, wherein the gaseous compounds are implanted by plasma assisted diffusion, thermal diffusion or plasma assisted diffusion combined with thermal diffusion and/or diffusion assisted by electrical polarization.

Claim 49 (new): The process according to claim 30, and further comprising a heat treatment step for weakening the substrate at the layer of inclusions so as to facilitate separation between the thin film and the remainder of the substrate.

Claim 50 (new): The process according to claim 30, and further comprising a step in which the thin film delimited in the substrate is placed in intimate contact with a support to which the thin film will bond after separation from the remainder of the substrate.

Claim 51 (new): The process according to claim 50, wherein said intimate contact is achieved by bonding.

Claim 52 (new): The process according to claim 49, wherein said heat treatment step comprises pulse heating.

Claim 53 (new): The process according to claim 30, wherein said thin film is separated from the remainder of the substrate by mechanical stress.

Claim 54 (new): The process according to claim 30, wherein the substrate comprises silicon.

Claim 55 (new): The process according to claim 30, wherein the substrate comprises a III-V semiconducting material.

Claim 56 (new): The process according to claim 30, wherein the substrate comprises a structure made of thin films.

Claim 57 (new): The process according to claim 30, and including the step of at least partially treating the thin film before it is separated from the substrate, to form, on all or part of the film being transferred, an integrated circuit.

Claim 58 (new): The process according to claim 30, and including the step of at least partially treating the thin film before it is separated from the substrate, to form, on all or part of the film being transferred, an optoelectronic component.

Claim 59 (new): A process for forming a thin film of material from a substrate, comprising the steps of:

(a) forming a gaseous compound trap zone by implantation of a layer of inclusions in the substrate at a depth corresponding to a required thickness of the thin film, wherein the inclusions originate from a parametric mismatch of material forming the inclusions layer with adjacent regions of the substrate;

(b) treating the substrate so as to introduce into the layer of inclusions, a dose of gaseous compounds sufficient to cause formation of micro-cavities in a fracture plane along which the thin film can be separated from the remainder of the substrate, the introduction of gaseous compounds involving a step of implantation of said gaseous compounds; and

(c) separating and recovering the thin film from the substrate along the fracture plane wherein the substrate is placed in intimate contact with a support to which the thin film will bond after separation from the remainder of the substrate.

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